

# **Appendix C**

## **Monitoring Program**

## **Monitoring Program for Keystone XL Pipeline Impacts to American Burying Beetle**

The U.S. Department of State (DOS) will retain a third-party contractor to develop and implement an American burying beetle monitoring program to assure that the provisions of the USFWS's Keystone XL Pipeline Biological Opinion under section 7 of the Endangered Species Act (ESA) (16 U.S.C. § 1536(a)(2)) are met through monitoring and habitat reclamation activities. This monitoring program would be approved and overseen by DOS in consultation with USFWS. TransCanada Keystone Pipeline, LP ("Keystone") would fund the monitoring program prior to construction of the proposed Keystone XL pipeline ("Project") in the states of South Dakota, Nebraska, and Oklahoma.

Monitoring will not replace the environmental quality control plan or the actions that Keystone would put in place, but is in addition to those tasks and will serve as a quality control monitor on behalf of DOS. The monitoring program would include but is not limited to, a combination of site visits, aerial surveillance, spot checks for seed mixture, and transect sampling for plant restoration that will be recorded in monitoring logs with photographs to provide a reasonable level of confidence that mitigation measures for restoration are followed. Monitoring would look at, but is not limited to, replacement of top soil; compliance with seeding specifications and seed mix; erosion control; that construction impacts match permitted footprint, and habitat restoration for the American burying beetle.

Due to the its size and life history, it is not possible to detect or directly monitor American burying beetle mortality caused by construction and operation of the Project. Therefore, acres of habitat disturbed by the Project will function as a surrogate for direct mortality or injury of American burying beetles resulting from construction and operation of the Project. This monitoring program will identify the number of acres disturbed by the Project in the states of South Dakota, Nebraska, and Oklahoma, and the number of acres restored as described in the Reclamation Performance Bond stipulations (Appendix E).

The third-party contractor would initially be retained for four (4) years commencing on the date of construction of the proposed Project in the states of South Dakota, Nebraska, and Oklahoma. With concurrence of the DOS and the USFWS, the monitoring program may be renewed, and the third-party contractor may be retained, for another four (4) years in the event of failure of habitat reclamation or delays in construction of the Project and/or reclamation activities.

The third-party contractor would undertake the following:

1. By October 1 of each year submit an annual monitoring plan for the following fiscal year in a letter to DOS for approval in consultation with USFWS. This plan would include the anticipated work effort and schedule, subject to the variability of weather, construction season, etc.

2. Maintain monitoring logs, photographs, and documents and provide DOS and USFWS a summarized monthly report during construction and a biannual report in the years after construction. At the end of this Agreement, all original files and documents will be provided to DOS and USFWS.
3. Contact the DOS designated point of contact when the Reasonable and Prudent Measures and Terms and Conditions set forth in the USFWS's Biological Opinion are not being met and work with DOS to remedy the situation(s) in consultation with USFWS.
4. Be available to DOS and USFWS for meetings or phone calls concerning the proposed Project, as the agencies deem appropriate.
5. Have designated inspector(s) attend safety training or meet other requirements Keystone may have for inspector(s) to access construction job sites.
6. Recognize and support that DOS, in consultation with USFWS, will have final determination of appropriate remedies for any failures by Keystone to comply with the requirements of the USFWS Biological Opinion, exclusive of the Migratory Bird Treaty Act.
7. It is anticipated that approximately 195 total workdays would be required to perform the above work.

The third-party contractor would be funded by Keystone. Keystone would also work with DOS and the third-party contractor to facilitate access to the pipeline right-of-way. It is anticipated that approximately 195 total workdays would be required to implement the monitoring program, as enumerated in the following table:

TABLE A, ESTIMATED ANNUAL WORKDAYS

<b>YEAR 1</b>	<b>(A) # Weeks</b>	<b>(B) Biologist Days/Week</b>	<b>(C) Total Biologist days (A * B)</b>
Construction <sup>1</sup>	36	2.5	90
Ground Assessments <sup>2</sup>	n/a	30	30
Aerial Patrol <sup>3</sup>	n/a	6	6
<b>YEAR 2</b>	<b>(A) # Weeks</b>	<b>(B) Biologist Days/Week</b>	<b>(C) Total Biologist days (A * B)</b>
Ground Assessments	n/a	30	30
Aerial Patrol	n/a	6	6
<b>YEAR 3</b>	<b>(A) # Weeks</b>	<b>(B) Biologist Days/Week</b>	<b>(C) Total Biologist days (A * B)</b>
Ground Assessments	n/a	15	15
Aerial Patrol	n/a	6	6
<b>YEAR 4</b>	<b>(A) # Weeks</b>	<b>(B) Biologist Days/Week</b>	<b>(C) Total Biologist days (A * B)</b>
Ground Assessments	n/a	6	6

Aerial Patrol	n/a	6	6
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1/Assumes 6 construction spreads constructing over 6 weeks with 1 biologist at each camp for 2.5 days per week including travel and office time.

2/Assumes 1 day office and travel for each 2 days in the field.

3/Assumes 3 flights annual with potential ground follow-up and office and travel of 1 day for each day in the air.